

AMENDMENTS TO THE DRAWINGS

Attached are two replacement drawing sheets, including Figs. 1, 2 and 3, which should replace the original drawing sheets, including Figs. 1, 2 and 3. The replacement drawing sheets include changes to Figs. 1 and 2. In Fig. 1, reference numerals "5" and 22" have been added. In Fig. 2, a second reference numeral "6" has been added so that Fig. 2 includes reference numeral identifying both of the outer mold parts.

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

The specification is amended to delete the paragraph on page two referring to the claims. Accordingly, withdrawal of the objection to the disclosure is respectfully requested.

Submitted with this Amendment are two replacement drawing sheets that include changes to Figs. 1 and 2 to address the drawing objections set forth on pages two and three of the Official Action. In particular, Fig. 1 is amended to include reference numerals "5" and "22". In addition, Fig. 2 is amended to include a second reference numeral "6" so that both of the illustrated outer mold parts are separately identified. Accordingly, withdrawal of the drawing objections is respectfully requested.

The subject matter of this application pertains to a method and apparatus for producing plastic parts attached to paperboard. Generally speaking, the method involves the use of a moulding tool in which a first force is applied to the moulding tool to hold together the moulding tool, whereupon the moulding tool is subjected to a second force greater than the first force for purposes of carrying out injection-molding. The moulding tool is then displaced or moved together with the plastic part after the injection-moulding. Advantages associated with the disclosed apparatus and method are described in the application.

By way of this Amendment, original Claims 1-31 are cancelled, and new Claims 32-59 are presented for consideration. Independent Claim 32 defines a method for producing injection moulded plastic parts attached to paperboard

comprising closing a moulding tool and applying a first force to the moulding tool to hold the moulding tool closed, with the moulding tool being positioned adjacent a portion of the paperboard to which the plastic part is to be attached, positioning an injection-moulding nozzle relative to the moulding tool to inject plastic into the closed moulding tool, applying a second force to the moulding tool which is greater than the first force to hold together the moulding tool during injection moulding, injection-moulding plastic into the moulding tool with the moulding tool positioned adjacent the paperboard to form the moulded plastic part attached to the paperboard, releasing the second force applied to the moulding tool, and moving the moulding tool together with the moulded plastic part attached to the paperboard.

The Official Action sets forth an anticipatory rejection of the method recited in original independent Claim 1 based on the disclosure in U.S. Patent No. 5,183,605 to *Brown et al.* This patent discloses a method and apparatus for injection moulding material into moulds. The focus of the disclosure involves the use of a self-clamping mould S. With this self-clamping mould S, the mould itself is able to withstand the component of the separation force attributed to the injection of material. In this way, the remainder of the apparatus used to carry out the injection moulding process need only provide a clamping force that resists the operating pressure externally applied to the mould during the injection of material into the mould. Generally speaking, *Brown et al.* discloses that a mould M is delivered to a moulding station, for example by way of a transport system conveyor 24, 24'. The mould is placed on a mould support 74 and is then lifted into engagement with a nozzle 43 of the injection moulding device. After injection moulding is completed, the self-clamping

mould containing the moulded part is moved out of the moulding station, and the next mould is moved into position.

Page four of the Official Action comments that the moulding tool disclosed in *Brown et al.* is subjected to a first force by virtue of the C-shaped frame generally shown in Fig. 1B, and is subjected to a second force greater than the first force when the mould is lifted into engagement with the injection moulding unit. From this, the Official Action concludes that *Brown et al.* discloses application of first and second forces as recited in original independent Claim 1. However, the observation that the moulding tool disclosed in *Brown* is subjected to a first force by virtue of the C-shaped frame is not understood. Prior to lifting the mould into engagement with the injection nozzle, the C-shaped frame disclosed in *Brown et al.* does not apply a force to the mould.

In any event, the wording in new independent Claim 32 presented here recites that a first force is applied to the moulding tool to hold the moulding tool closed and that the moulding tool is positioned adjacent a portion of the paperboard to which the plastic part is to be attached. The claim then goes onto recite the application of a second force to the moulding tool greater than the first force, injection-moulding plastic into the moulding tool to form the moulded plastic part attached to the paperboard, and thereafter moving the moulding tool together with the moulded plastic part attached to the paperboard. Quite clearly, *Brown et al.* does not disclose injection moulding a plastic part attached to paperboard as recited. Rather, *Brown et al.* is solely concerned with fabrication of a stand-alone plastic product.

The Official Action comments in paragraph "7" that it would have been obvious in light of U.S. Patent No. 6,467,239 to *Lees et al.* to apply the disclosure in

Brown et al. to the attachment of plastic parts to a sleeve or web of material. In support of this position, the Official Action refers to the discussion in the last 7 lines of column 4 of *Brown et al.* In particular, the Official Action suggests that this portion of the *Brown et al.* disclosure would have motivated one to utilize *Brown et al.*'s disclosure in connection with the attachment of a plastic part to a sleeve or web used to produce packages. That position is respectfully traversed.

The discussion at the bottom of column 4 of *Brown et al.* is very general in nature, does not mention moulding plastic parts to paperboard and thus cannot be said to provide a teaching or suggestion that would have motivated one of ordinary skill in the art to utilize *Brown et al.*'s disclosure to apply a plastic part to paperboard. Indeed, the discussion at the bottom of column 4 of *Brown et al.* merely states that

[a]lthough an example of a preferred form of the present invention will be discussed in detail, one of ordinary skill may adapt the present invention for the moulding of larger and/or different items by changing the relative size of the invention components as may be necessary to accommodate the injection of material for such items desired to be moulded.

Thus, this discussion in *Brown et al.* merely contemplates that the disclosed method can be used to mould larger articles or different items. Nowhere does *Brown et al.* state that the disclosed method and apparatus should be used to injection mould articles that are attached to paperboard.

For at least the reasons set forth above, it is respectfully submitted that the claimed method recited in independent Claim 32 is patentably distinguishable over the disclosure in *Brown et al.*

New independent Claim 41 defines an apparatus for producing plastic parts attached to paperboard. The claimed apparatus comprises an injection-moulding

nozzle positioned at an injection moulding position at which injection-moulding of a plastic part to paperboard takes place, and a moulding tool comprised of cooperating mould parts movable between an open condition and a closed condition, with the injection-moulding nozzle injecting plastic into the moulding tool when the moulding tool is in the closed condition at the injection moulding position to produce a plastic part attached to the paperboard. The claim also recites means for displacement of the moulding tool together with the plastic part attached to the paperboard in relation to the injection-moulding position, means for applying a first force to the mould parts to hold the mould parts together, and a unity device which applies to the mould parts, after application of the first force, a second force greater than the first force to hold the mould parts together during the injection moulding.

Once again, the apparatus disclosed in *Brown et al.* does not disclose an apparatus for producing plastic parts attached to paperboard including an injection-moulding nozzle positioned at an injection moulding position at which injection-moulding of a plastic part to paperboard takes place, with the injection-moulding nozzle injecting plastic into the moulding tool when the moulding tool is in the closed condition at the injection moulding position to produce a plastic part attached to paperboard.

New independent Claim 54 defines that the apparatus for producing plastic parts attached to paperboard comprises an injection-moulding nozzle positioned at an injection moulding position at which injection-moulding of a plastic part to paperboard takes place, a plurality of spaced apart moulding tools each comprised of cooperating mould parts movable between an open condition and a closed condition, with the injection-moulding nozzle injecting plastic into the moulding tools

in a successive manner when the moulding tools are in the closed condition at the injection moulding position to produce a plurality of respective plastic parts attached to the paperboard, means for moving the moulding tools towards the injection moulding position and for moving the moulding tools, together with the respective plastic parts attached to the paperboard, away from the injection-moulding position after the injection moulding, means for initially applying a first force to the mould parts of each mould tool as the mould tool is moved towards the injection moulding position to hold the mould parts together, and a unity device which applies a second force greater than the first force to the mould parts of each mould tool at the injection moulding position to hold the mould parts together during the injection moulding.

As pointed out above, *Brown et al.* does not disclose an apparatus for producing plastic parts attached to paperboard including an injection-moulding nozzle positioned at an injection moulding position at which injection-moulding of a plastic part to paperboard takes place, with the injection-moulding nozzle injecting plastic into the moulding tools in a successive manner when the moulding tools are in the closed condition at the injection moulding position to produce a plurality of respective plastic parts attached to the paperboard, and means for moving the moulding tools, together with the respective plastic parts attached to the paperboard, away from the injection-moulding position after the injection moulding.

The other documents relied upon in the Official Action do not make up for the deficiencies pointed out above with respect to the disclosure in *Brown et al.* Accordingly, a combination of the disclosures in such references would not have led one to do that which defined in the independent claims as the invention.

The new dependent claims define additional distinguishing aspects and features associated with the claimed method and apparatus. These dependent claims are allowable at least by virtue of their dependence from allowable independent claims. Thus, a detailed discussion of the additional distinguishing features set forth in the dependent claims is not set forth at this time.

Early and favorable action with respect to this application is respectfully requested.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: April 10, 2007

By:



Matthew L. Schneider
Registration No. 32814

P.O. Box 1404
Alexandria, VA 22313-1404
703 836 6620